

### Abstract of the Disclosure

5           A modified alkali silicate composition for forming an inorganic network matrix.  
The modified alkali silicate matrix is made by reacting an alkali silicate (or its precursors  
such as an alkali hydroxide, a  $\text{SiO}_2$  source and water), an acidic inorganic composition,  
such as a reactive glass, water and optional fillers, additives and processing aids. An  
inorganic matrix composite can be prepared by applying a slurry of the modified aqueous  
10 alkali silicate composition to a reinforcing medium and applying the temperature and  
pressure necessary to consolidate the desired form. The composite can be shaped by  
compression molding as well as other known fabrication methods. A notable aspect of the  
invention is that, although composite and neat resin components prepared from the  
invention can exhibit excellent dimensional stability to  $1000^\circ\text{C}$  and higher, they can be  
15 prepared at the lower temperatures and pressures typical to organic polymer processing.

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